

Paper Use Guidelines for Your ENERGY STAR® Labeled Copier



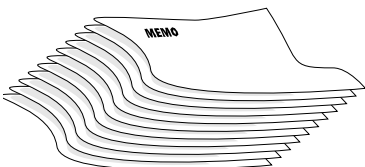
INSERT COMPANY
LOGO HERE

BACKGROUND

The typical U.S. office worker uses 10,000 sheets of paper per year. At an average cost of 0.5 cents per sheet, this amounts to \$50 per year for each employee. Much of this paper is wasted, printing multiple drafts and discarding the paper, making more copies than required, using only part of the paper, and printing or copying a document just to let it sit untouched in a file drawer until its eventual discard.

WHAT IS PAPER EFFICIENCY?

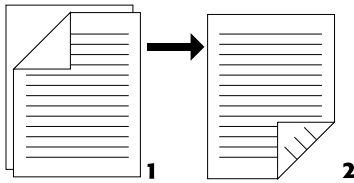
Every sheet of paper embodies the energy that was used to produce it. This is typically the equivalent of 16 Wh (watt-hours) per sheet of 20% recycled-content paper to 17 Wh for a sheet of 100% virgin paper. This energy to produce paper also contributes to air pollution. So, when you reduce paper use, or increase paper efficiency, you save money, energy, and help the environment. Paper efficiency is making the most productive use of the embedded energy and resources in the paper as well as those used to imprint images on the page. *The less paper used to accomplish a task, the more paper efficient that task will be.*



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HOW CAN I BE MORE PAPER EFFICIENT?



By using both sides of a sheet of paper when printing or copying any document longer than one page, you can reduce paper purchasing costs by up to 50%

Duplexing

The simplest way to increase paper efficiency is to use both sides of the sheet when printing or copying any document longer than one page. By duplexing, you can reduce paper purchasing costs by up to 50%. For a typical office, an annual savings of up to \$1,600 for each copier is possible! That is why ENERGY STAR® labeled copiers offer default duplexing—optional for medium-speed (20–44 copies per minute) copiers and default for all high-speed copiers.

When printing, most software applications offer the option of duplexing (often several layers down in the print menu). Although the duplexing unit for your printer takes a bit of investment (average of \$775 for a duplexing unit), typically, you will recoup that investment in a year and a half through savings on paper purchases with a 50% duplex printing rate, and under a year if your print duplex rate is 75%. The “payback time” decreases the more you print in duplex mode.

Once your printed original is duplexed, you can work with a copier that is set to automatically duplex from a double-sided document (2:2 copying) to save even more paper. Further, newer models of fax machines accommodate double-sided documents. With all these features, single-sided printing and copying could become the exception rather than the standard practice!

For copying, paper is a significant factor in the total cost per image, and could be reduced easily. For medium-speed copiers, when using the copier within the recommended volume range, paper constitutes over 20% of the total cost per copy (other cost factors include lease or purchase, service, toner, and parts). When your copier is in default duplex mode, it will copy from single-to-double sided sheets (1:2 copying) or duplex to duplex (2:2) unless you indicate otherwise. It may either count the number of originals or ask you whether you are copying from an odd or even number of originals (this allows you to avoid a blank sheet on the back of the first page). You can ask your service representative to modify the default setting so the copier doesn't count the originals or automatically duplexes from double-sided originals—great if you also print in duplex mode!

Image Size Reduction

Most high quality copiers allow you to reduce the size of the image, allowing you to fit more images on each sheet while retaining legibility. You can also use the “book”



function to copy both pages of a book onto a single sheet. That way, you will be able to fit two images per side, for a total of 4 images per sheet of paper (in duplex mode), while retaining the quality and readability of the document.

Another aspect of image reduction is printing or copying several images per side of paper. This is known as “n-up” printing, because you can print 2-up (two images per side), 4-up, and so on. Like duplex printing, you typically control “n-up” printing through the print menu on your computer. It is ideal for printing documents with large typeface. When combined with duplexing, by using just 2-up printing, you can reduce a 16-page briefing to 4 sheets of paper. Suddenly, you can carry the handouts for your next meeting!

Electronic Communication

How many times have you sent or requested a fax, only to learn that it was lost in handling along the way? When you send a document by electronic mail rather than printing and faxing it to another site, you eliminate two sets of printouts, while increasing your ability to track and save the document.

An ever growing number of workers have access to electronic communication tools, for connecting either within the workplace or to all computer-based networks. Within the office, you can eliminate paper memos by sending electronic mail to all employees. Similarly, much paperwork, ranging from tracking accounting records to scheduling meetings, can now be accomplished without the need for printing and filling out forms by hand.

Try to reduce the amount of printing and copying you do, replacing those functions with electronic mail. That way, you can store the files on your computer, rather than on paper, saving energy, paper, money, mailing costs, telephone (fax) charges, and storage space!

As you increase your electronic-based work, encourage your co-workers to print only those e-mails that they will need to reference while away from their desks. There is little paper efficiency if each recipient of an e-mail prints every message.

In addition to electronic mail, many office workers can fax documents directly from their PCs, eliminating the need to print in hard copy. If you need to fax rather than send an e-mail, try to fax directly to the recipient's PC, thus avoiding a hard copy on the receiving end as well. In some cases, faxing from one PC to another eliminates the uncertainties involved in e-mailing large or complex files, such as graphics documents. In many cases, the recipient receives the fax as a graphics file that can be pasted directly into another document.



Paper Use Guidelines

Avoiding Unnecessary Paper Use

As you begin your efforts to develop a more paper efficient workplace, you will become more aware of all the excess paper use that takes place in a typical office. For example, you may make many extra copies of documents for meetings. By providing copies (or diskettes) to interested attendees after a meeting, you will avoid making copies in excess of people, and will eliminate others' need to dispose of (recycle) unwanted documents. You may even find that people pay greater attention when they are not reading as you speak!

Another way to reduce extra copies is to change the practice of distributing documents to all staff regardless of interest. Instead, notify all staff (via e-mail if possible, or if your office does not have internal e-mail, posting a message in a central location also works) of a document's availability, then provide copies (or an electronic version) only to those who will benefit from it. Many offices now have access to the Internet. This provides an ideal way to distribute documents broadly without printing, copying, postage, and other distribution costs. For internal documents, *intranet* solutions

offer the same ease and flexibility of distribution while limiting access to a fixed recipient group.

Other common office practices lead to unnecessary inefficiencies. Fax cover sheets that do not convey messages cost both the sender and recipient an extra sheet per fax. Test pages for printers and document summary sheets on printed documents similarly provide no added value, but use valuable resources. Additionally, even as offices have increased their paper recycling rates, they can increase their efficiency by making full use of paper before recycling it. For example, sheets printed on only one side can be reused as note or message paper (you can even have the paper cut and bound into message pads), or used as draft paper. Some offices have found that paper used on one side works for draft printing—curled paper is pressed under a heavy weight for a couple days, and may work in some printers.

By monitoring the use of paper against the value provided, you may be able to identify additional ways to increase the productivity of your office's paper use.

WHAT TYPE OF PAPER SHOULD I USE?



Your service representative can probably recommend a range of recycled papers for use in your ENERGY STAR compliant copier; you can also check your user's manual for a list of suggested paper specifications or brands. Most copiers are tested (and run well) with 20% post-consumer recycled content. This level (20–25%) of recycled content can save energy in the production of paper. [Average embodied energy is 12 Wh for 100% recycled-content, 16 Wh for 20% recycled-content, and 17 Wh for 100% virgin paper.]

Another option to consider is in using lighter weight papers for everyday copying and printing. Most copy machines work with 16 lb or 18 lb paper, which is lighter than the 20 lb paper used in most U.S. offices. By reducing the weight of your paper, you achieve the same purpose of communicating on paper, but require fewer resources to achieve your goal. All this adds up to greater efficiency!

